Session 20: Usability Test Planning
Formative User Testing
Overview

1. Gather information about your users & their goals (task analysis)
2. Determine what about your product you want to test
3. Write scenarios for testing
4. Determine testing metrics
5. Conduct user tests
6. Analyze results, plan design changes
7. Produce next version of your site
Conduct Formative Usability Tests to Allow User Goals to Influence the Design Process

Each test you plan should begin with a basic user-centered goal that the system in development aims to meet. Tests can target more than one of these.

We test because we reach a point in the design process when we can no longer accurately “guess” how to best meet our users’ needs.
Common methods for gathering user information

- Scenario-based observations*
- Interviews
- Focus groups / group interviews
- Surveys

*you can use competitor products, as well as low or hi-fi prototypes of your product
Not formal research

- Small samples are ok, even preferred for formative testing; though getting a good sample is still crucial
- The goal is to discover patterns of user behavior that can be supported or enhanced by the product, not to prove or disprove a theory, etc.
- Talk to people and watch them use the product...much better than giving them questionnaires only
- Use low-fi prototypes if you want critical feedback; users are reluctant to criticize “slick” prototypes
Plan Ahead with Needs Analysis

- Work with accurate, compelling scenarios and task sequences – derive these from real world situations if you can
- Sequence each measure to provide the maximum feedback possible per user
- Practice your data gathering methods a few times with your team before you do them for real
Gathering User Data

- Create materials for collecting user info ahead of time – note-taking forms, questions for interviews, etc.
- Have more than one pair of eyes, and hands, per user if possible
- For formative tests, use focused data collection methods that filter rich information rather than using videotape or audiotape that must be processed later
Things to Remember

- You are *not* testing the user…it’s ok to talk to them, help them, ask them questions
- There may be times when you shouldn’t offer help – that’s ok too – just let the user know you can answer questions after the test
- Use talk-aloud protocol to get user insights during use
- Test in the user’s “natural habitat” whenever possible
- 4 to 8 users is probably plenty for formative testing
Planning a test: An Example

- Look at website: Rhetoric & Writing Graduate Program
- Determine Who We Want To Test
- Determine What We Want to Test
- Determine Our Test Metrics
- Write a Scenario
- Plan a Test Protocol
- Create data gathering tools
Determine Who We Want to Test

User Group: PW majors weighing grad school options

Goal: Compare programs to determine which offers best opportunities

How could we measure whether our site meets this goal?
Determine What We Want to Test

For each user goal, list a specific, observable outcome we can solicit from users.

Outcomes:
- User finds information about program requirements, courses
- After test, user can discuss strengths and focus areas of program
Determine Our Test Metrics, 1
Performance Criteria

Define Specific Criteria for Success for each Outcome

- User locates 4 categories of information for program comparisons; (lists them on form)
- User is able to find and download application (yes/no)
- User is able find all information in less than 10 minutes, total; (allow for server delays?)
- User is able to navigate site with fewer than 3 “Dead Ends.”

Note: Common performance metrics are based on task success, time, and # of errors
Determine Our Test Metrics, 2 User Satisfaction Criteria

Define Specific Criteria for Success for each Outcome

- User finds the site helpful, well-suited to the task (4 or 5 on a 5 pt. scale)
- User finds the site easy to use (4 or 5 on a 5 pt. scale)
- Users are confident that they completed the task successfully (4 or 5, etc.)

Note: Common satisfaction metrics are based on confidence of task success, perceived difficulty, and frustration level
Write a Scenario

“You are considering going to graduate school, and you are interested in knowing how well the MSU program stacks up to others you are considering.”

Please use the R&W Graduate program website to gather the materials you feel are necessary to:

– Understand the focuses and strengths of the program
– Compare the program with other programs you may be interested in

You can have more than 1 scenario; we usually limit a test to no more than 2 or 3.
Create a Protocol, 1: Users & Preconditions

User: PW undergraduate major

 Preconditions:
Create a Protocol, 2: Order of Events

1. Disclaimer & Confidentiality
2. Pre-Test Questionnaire
3. User Reads Background info out loud; questions?
4. User Reads Scenario 1; does task 1; continue until all 3 tasks complete; completes post-task questionnaire
5. Post-test Interview
6. Thanks!
Create Test Materials

1. Disclaimer; thank you note.
2. Background information sheet on user’s “role”
3. Scenarios & task sheet with blanks for participant fill-ins
4. Questionnaire/Interview Questions: pre-test, post-task, post-test
5. Observation note form for each task/observer
6. Set up workstation w/objects user will use during tasks
Do the test

- Have at least 2 people: one is a “guide” who explains the procedure and conducts the interviews and tests; the other person is the “researcher” whose sole job is to observe and take notes, etc.
- Depending on how many users you are running and the nature of the test, you may also need a tech. person to set up the room, computer, etc. before each new test
- Practice first! It will make a big difference
Analyze Test Data

- Aim for a Top 5 or Top 10 Changes format
- Group your data using the “User Goals” – for each, summarize performance & satisfaction data;
- Give a summary assessment of your design’s performance for each user goal
- List significant “stoppers” and major complaints
- Rank each goal that has negative data associated with it and each major complaint in order of severity
We usually rank usability problems according to how they affected the user:

1. Kept user from completing task
2. Annoyed user, but did not affect task success
3. 
4. 
5. 

By combining a severity rating with a sense of how important a given task is to a design’s overall success, we can assign priority to fixing specific usability problems…then you address these in order.